DEPARTMENTAL EXAMINATIONS, 1925

GRADE VIII.

AGRICULTURE, PHYSIOLOGY AND HYGIENE, AND ART.

Time—Two and one-half hours.

AGRICULTURE.

N.B.—Tests are provided on both Section 1 and Section 2. Candidates shall write on *one* Section only. *Either* section will be accepted.

SECTION I.

Values.

1. Describe wheat production under the following headings:

2 (*a*) The names of *two* varieties of Spring Wheat well suited for growing in Alberta.

2 (*b*) The names of *four* wheat products.

2 (*c*) The names of *two* enemies of the wheat plant.

3 (*d*) The conditions of soil and climate best suited for the production of wheat of good market qualities.

6 **2.** (*a*) What are *two* important uses to a plant of (1) its leaves, (2) its stem, (3) its roots?

5 (*b*) (1) Name *five* legumes which grow in Alberta.

4 (2) Name *two* features by means of which you would know plants of the legume family from those of other families.

2 **3.** (*a*) Name (1) *one* breed of hen which ranks high in egg production (2) *one* breed which ranks high for meat purposes.

3 (*b*) Describe poultry raising under the following headings:

(1) The care of the eggs before setting.

(2) The care of the hen while brooding.

(3) The care of the young chicks.

2 (*c*) Tell both how and why (1) eggs are candled, (2) eggs are graded.

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Values.

3 **4.** (*a*) Give *three* important reasons why it is desirable to adopt diversified or mixed farming in Alberta.

4 (*b*) Of what advantage is it, in mixed farming, to keep a flock of sheep?

2 (*c*) Name *one* breed of sheep well suited for mutton production and *another* breed valuable for wool production.

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Section II.

4 **1.** (*a*) Describe, using drawings, the structure of the seed of the corn.

2 (*b*) What are the functions or uses of the tassels and silk of the corn plant?

1 (*c*) Account for the fact that the grains of corn of the same *ear* are not always all of the same color.

2. Write an account of *each* of any *five* of the weeds named below, under the following headings:

5 (*a*) How to recognize each.

5 (*b*) Why specially harmful.

5 (*c*) How to eradicate.

The weeds are couch grass, death camas, tumbling mustard, loco weed, Russian thistle, wild sunflower, tall larkspur, perennial sow thistle, ball mustard and Canada thistle.

3. Write accounts of sand, clay and humus under the following headings:

3 (*a*) Origin.

3 (*b*) Agents which act in forming them.

3 (*c*) Capacity for moisture.

2 (*d*) The importance of humus and clay in soils.

2 **4.** (*a*) Name *two* small fruits which flourish under cultivation in Alberta.

(*b*) Tell how you would commence producing *each* of the fruits named in (*a*) under the following headings:

1 (1) The preparation of the soil.

2 (2) The parts of the plant from which you would produce new plants.

2 (3) State *two* conditions which it is necessary to observe in planting the parts selected in (2) in order to insure successful growth.

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PHYSIOLOGY AND HYGIENE.

Values.

2 **1.** (*a*) Name the principal divisions of the human skeleton.

2 (*b*) State the position in the skeleton of one ball-and-socket joint and one hinge joint.

1 (*c*) Of what use is the skeleton to the body?

2 **2.** (*a*) What is the function or use of the lymph in the human body?

6 (*b*) Where are *three* of the following organs located in the human body and what is the use or work of each: (1) the heart, (2) the lungs, (3) the stomach, (4) the liver?

1 **3.** (*a*) Why does the air in a schoolroom and in our bedrooms become foul after they have been in use for some time?

1 (*b*) Tell how you would improve the bad condition referred to in each case in (*a*).

1 (*c*) State the temperature which the thermometer in your schoolroom should indicate in order that the pupils may be comfortably warm.

4. Write an account of the effects of drinking alcoholic liquors under the following headings:

2 (*a*) The effect on the heart and blood vessels.

2 (*b*) The effect on the brain.

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ART.

NOTE: 1. Answer any *two* questions.
2. Make all drawings as large as the paper will allow.
3. Use foolscap for question 5.

Values.

20 **1.** Make a drawing of the corner of a room, as an example of angular perspective. Show a window placed in position in this room.

20 **2.** Make a pencil drawing showing light and shade and shadow of a box with the lid open. Let this be an example of angular perspective.
NOTE: *Do not use a ruler in making this drawing.*

20 **3.** Make a drawing of what you think is a good design for a book cover. Use a decorative landscape as an illustration and make the title in modified line capital letters. Work as follows: (*a*) Plan your sketch. (*b*) Fill in the details of lettering and drawing. (*c*) Color part of the sketch to show your color plan.

Values.

20 **4.** Draw a plan of a small city park size 500 feet by 250 feet. Draw this to scale and show the position of walks, flower beds, trees, shrubs, etc. Color part of your work and state what scale you are using.

Or

Draw the front elevation of a small two storey house. Give the dimensions of the various features.

20 **5.** Write a description of the given picture.

(1) Tell the story of the picture, referring to the figures, clothing, expression, etc.

(2) Mention details of the clever composition shown in the picture.

(3) Name the artist and mention other pictures painted by him.

(4) Give any other features worthy of comment.

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